

G.R.

3/3587.

MR. STRATH

Copy to Mr. Stock

Bvg. Godwin.

Information on Civil Defence and
atomic weapon effects

I attach a note on the various channels through which information on Civil Defence - in particular, information on atomic weapon effects - passes into this country and between the organisations concerned.

The picture is a complex one. I have based my information on conversations with Dr. Purcell (Home Office), Mr. Wright (Ministry of Defence), and with a member of the Intelligence Division of the Home Office. I have not attempted to go further at this stage.

A critical assessment of this field would require more research, particularly at the Home Office and at Harwell.

The relationships are complex, often because of security, but so far I have not heard of any complaints except for the unfortunate geographical distance between the Scientific Adviser at the Home Office and the Civil Defence Joint Planning Staff.

G.W. Robertson

24th January, 1955

Information on Civil Defence and atomic weapon effects

The information on Civil Defence and atomic weapons can be divided into the following categories:-

- (i) Published information on Civil Defence policy, plans, techniques and equipment by other Governments, especially publications etc. by the United States Federal Civil Defence Administration.
- (ii) Confidential information as above, in particular the assumptions on weapon effects used in Civil Defence planning, especially those used by the F.D.C.A.
- (iii) Classified information on atomic weapon effects from either United Kingdom sources, the U.S. Atomic Energy Commission, or other U.S. bodies in this field, e.g. U.S. naval atomic energy establishments.

There is a complex interchange of information within the United Kingdom between the following:-

I. Home Office

- (i) Civil Defence Joint Planning Staff
- (ii) Intelligence Division
- (iii) Scientific Advisers Branch

II. Ministry of Defence

- (i) Chiefs of Staff (Atomic Weapons Sub-Committee of the Defence Research and Policy Committee and the Working Party on Operational Aspects of Atomic Weapons).

- (ii) J.I.B.

III. Ministry of Supply

- (i) Controller of atomic weapons (Atomic Weapons Research Establishment).

IV. Atomic Energy Authority

- (i) Atomic Energy Research Establishment, Harwell

V. Service Departments

- (i) Scientific Advisers

VI. Medical Research Council

Emphasis in this note is on the information coming into, and disseminated by, the Home Office.

Home Office

The Home Office collects information through the following channels:-

I. Intelligence Division (largely categories (a) and (b))

- (i) A representative of the Ministry of Supply at the B.J.S.M. is responsible for collecting documents published by the F.C.D.A. and passing them on to the Home Office.

[Note: Since the F.C.D.A. moved from Washington this source of information has lost a great deal of its value.]

- (ii) Direct contact has been established with the F.C.D.A. whereby they sent to the Home Office all Information Sheets and Daily News Sheets.

- (iii) Information on Civil Defence in N.A.T.O. countries is collected formally and informally through N.A.T.O. Civil Defence activities. In addition, there is a direct exchange of information by correspondence with various N.A.T.O. countries, in particular Norway and Sweden.

[Note: All films produced by the F.C.D.A. are sent to the N.A.T.O. Film Library.]

- (iv) Military Attachés in all countries have the responsibility of forwarding Civil Defence information to the Home Office.

[Note: Information on German Civil Defence is obtained by direct contacts with the German Civil Defence authorities and through the Sub-Committee on Civil Defence which includes Germany, and it has been set up in anticipation of Germany becoming a member of N.A.T.O.]

- (v) The Home Office has access to information on Civil Defence preparations in the Soviet Bloc which is collected by J.I.B.

II. Civil Defence Joint Planning Staff

(in particular Category (b))

- (i) The Chairman of the C.D.J.P.S. corresponds directly with his opposite number in the F.C.D.A. on specific problems.

- (ii) The Chairman of the C.D.J.P.S. gets planning assumptions from Civil Defence from the C.O.S.

III. Scientific Advisers Branch

(largely Categories (b) and (c))

- (i) Information from U.S. sources on weapon effects from the scientific staff of the Ministry of Defence.

(ii) Penny's Circle. This consists of named individuals in the Ministry of Supply (including A.W.R.E.), Home Office (Scientific Advisers), Service Departments and Ministry of Defence.

✓Note: This circle of named individuals acts as a means of disseminating information - largely verbal - on a reciprocal basis, e.g. if the Admiralty representative picks up information through United Kingdom Naval/U.S. Naval contacts he passes this round the circle.✓

(iii) There is a direct contact between the Home Office Scientific Adviser and A.W.R.E. on United Kingdom information.

(iv) The Scientific Adviser at the Home Office has direct contact with Sir Frederick Brundrett.

✓Note: This is recognised by Sir Frank Newsam as the channel for scientific information to the Home Office and covers both United Kingdom and U.S. sources.✓

In addition to the above medical aspects of atomic weapon effects, in particular radiation problems, are co-ordinated in the United Kingdom by a Committee under Sir H. Hinsworth (Secretary to the Medical Research Council). This Committee consists of representatives from the Home Office, Ministry of Health and A.E.R.E., and other Departments.

✓Note: The chief source of medical attention from the United States is through the British Civil Scientific Office, Washington.✓

Ministry of Defence (atomic weapons) - General note on U.S. contacts

The policy of the Atomic Weapons Research and Development Programme is determined by the Defence Research Policy Committee's Sub-Committee on Atomic Weapons. The D.R.P. give scientific advice on atomic weapons to the Chiefs of Staff and the Ministry of Defence.

The Chiefs of Staff determine:-

- (i) General policy and development of atomic weapons.
- (ii) Priorities between weapons.
- (iii) Allocation of fissile materials.

The Chiefs of Staff have a working party, the Operational Aspects of Atomic Weapons Working Party (O.A.W.) which is served by a staff, some of whose members are also on the Defence Research Policy Committee's staff. The O.A.W., under Sir Frederick Brundrett (who is Chairman of the D.R.P.C. and Scientific Adviser to the Minister of Defence) has the

responsibility of disseminating information from the United States in the military atomic field and likewise collates information from the United Kingdom for dispatch to the United States.

This exchange of information between ourselves, the Americans and the Canadians was the result of the conference held in February 1953, and on the effects side it covered:-

- (i) immediate military effects, i.e. on tanks;
- (ii) effects on organisation strategy;
- (iii) radiation medicine (exchange of information in this field has been going on for some time).

An Officer of the B.J.S.M. represents Sir Frederick Brundrett on military aspects of atomic weapons. He acts as a Post Office but he is also expected to prod the Americans for information.

Dissemination of information between Civil Departments

Classified information is dealt with as follows. The Civil Departments concerned have an unnamed contact who is generally on the technical or scientific staff and has been positively vetted, to which all information of this kind is channeled.

The Scientific Sub-Committee of the Civil Defence (Official) Committee consists of the above-named personnel and includes representatives from the Admiralty; Air Ministry, A.W.R.E. and Harwell. This sub-committee, which is mainly concerned with the effects of atomic weapons works with three main panels (a) ~~blast~~, (b) radiation, and (c) thermal. One of its functions is to see that all Departments are working on the most up-to-date basic data for such tasks as the effects of weapons on specific targets, e.g. tanks, aircraft, houses, shelters and ships.

The Home Office Scientific Advisers Branch disseminates all technical information to the Civil Departments on a "need to know" basis and assists Departments in interpreting the data and information supplied to them. This includes the responsibility of checking the technical information used by the Home Office's own Civil Defence staff, e.g. C.D.J.P.S.

Chief centres of printed information on Civil Defence and effects of atomic weapons are as follows:-

- (i) The Ministry of Defence have a library of classified atomic military information.
- (ii) Harwell has a very full library of information on atomic energy.
- (iii) The Home Office have a large library of information on Civil Defence.
- (iv) Libraries are also being built up in the Ministry of Supply, both under the Controller of Atomic Weapons and at A.W.R.E.

SECRET

Available

(42)

SG

MR. STRATH

I attach some notes by Mr. Robertson on Sir Robert Hall's paper about Economic Defence (S.G.(55) 5) as you may wish to see them without delay.

2. I can only add preliminary impressions on this paper which I had not studied because I thought it was to be revised. I now gather this is not intended for the next meeting.

3. Sir Robert Hall's first sketch paints a picture which I feel may be over-optimistic; it depends, amongst other things, on:-

(a) A pattern in which an assumed number of H-bombs fall. Such assumptions can never be more than highly speculative guess work and we may need in the end to draw general implications from alternative sets of assumptions - one leaving a (relative) "balanced" economic structure and the other a much more unbalanced economy.

(b) An absence of dislocation from forms of attack other than the H-bomb. This point is brought out in his penultimate paragraph and I feel that we still need working assumptions (? from J.I.C. through Mr. Dean) about the overall weight of attack as proposed to the H-bomb attack alone. This need not be elaborate but unless we get guidance to the contrary it is dangerous to draw deductions, certainly on the basis of one arm of the enemy's offensive power, though admittedly it is the most destructive. Guidance, for instance, on this point is likely to be relevant to shelter and evacuation policy.

4. I suggest that in the initial stages of considering the economic problem we should endeavour to leave aside for a time the external problems which can better be considered when we get a clearer picture of the internal conditions in the United Kingdom.

5. I think we need a clearer picture of the broad relationship between housing capacity and survivors (of all kinds). If it then looks as if accommodation outside the devastated areas will be sufficient to cope with survivors this will, to some extent, set the foundation for the study of recovery and, in particular, for the distribution problems to be overcome in order to regain mobility after the initial payalysis.

(Sgd.) K. L. STOCK

22nd January, 1955

TOP SECRET
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MR. STOCK

(Copies to: Mr. Brock
Wing Commander Carter
Mr. Robertson
Commander Barlow-Wilson)

DISTANCE OF EFFECT

<u>Blast from Air Burst</u>	<u>20 MT</u>	<u>10 MT</u>	<u>5 MT</u>
House collapse	10	8	6.3
Severe structural damage	14	10	8.6

radii in miles

For ground burst, factor is $\frac{2}{3}$

Heat from Air Burst

On an average day with no
dense cloud or fog.
Sufficient to set a
normal house on fire.

13-17

10-15

7-12

radii in miles

For ground burst, factor is only slightly
less than 1.

(Sgd) J. F. Godwin

Central War Plans Secretariat,
Cabinet Office, S.W.1.

19th January, 1955.